APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
NG, CHRISTINE Y

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/695,199	VALENCIA, ANDREW
	Examiner	Art Unit
	Christine Ng	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>*11 April 2006*</u>.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>*1-30*</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) <u>*7,8 and 19*</u> is/are allowed.
6) ☒ Claim(s) <u>*1-6,9-18 and 20-30*</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>*28 October 2003*</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-6, 9-18, 20, 21 and 26-30 are rejected under 35 U.S.C. 102(b) as being

anticipated by U.S. Patent No. 6,421,720 to Fitzgerald.

Referring to claims 1, 11, 16 and 26, Fitzgerald discloses a method for

processing packets in network (Figure 1, packet network 16), comprising:

Receiving (Figure 2, from voice encoder 22) a packet flow, the packet flow

including encoded information. The packet flow includes encoded information since the

voice encoder 22 encodes audio signals into audio packets. Refer to Column 2, line 47

to Column 3, line 11.

Determining if the encoded information in the packet flow includes a pause. The

encoded packet flow is "paused" when the network experiences congestion. Refer to

Column 3, lines 25-34 and Column 4, lines 9-40.

Adjusting (Figures 4 and 5) fragmentation of packets in the packet flow according

to whether the encoded information in the packet flow includes the pause. If the

encoded packet flow experiences no congestion, the packet payload size (Figure 4,

packet 40) remains constant (Figure 5, steps 46-52). The more congestion the encoded

packet flow experiences, the greater the packet payload size (Figure 4, packets 42 and 44). Refer to Column 4, lines 16-40 and Column 4, line 53 to Column 5, line 12.

Referring to claim 2, Fitzgerald discloses in Figures 4 and 5 that the method will not perform fragmentation of the packet flow in response to the encoded information in the packet flow including the pause. If the packet flow (Figure 4, packet 44) experiences heavy congestion (the packet flow is paused), the method will not perform fragmentation of the packet flow; the packet payload will contain a maximum payload size of 100ms. Refer to Column 4, lines 9-40 and Column 4, line 53 to Column 5, line 12.

Referring to claims 3, 12, 17 and 27, Fitzgerald discloses performing fragmentation of packets in the packet flow in response to the encoded information in the packet flow not including the pause. If the packet flow (Figure 4, packet 40) experiences no congestion (the packet flow is not paused), the method will perform fragmentation of the packet flow; the packet payload will contain the conventional payload of 20ms. Refer to Column 1, lines 20-31; Column 4, lines 9-40 and Column 4, line 53 to Column 5, line 12.

Referring to claims 4, 13, 18 and 28, Fitzgerald discloses in Figure 4 fragmenting those packets of the packet flow that exceed a predetermined size (20ms). The conventional packet payload size is 20ms. Refer to Column 1, lines 20-31 and Column 4, lines 9-27.

Referring to claims 5, 15 and 30, Fitzgerald discloses in Figure 4 that the predetermined state size (20ms) is associated with a different packet flow. The typical

minimum payload size is 10-20ms; however, "smaller or larger audio payloads may be used depending on specific network conditions". Refer to Column 4, lines 9-15.

Referring to claim 6, Fitzgerald discloses in Figure 1 that the receiver (gateway 18) receives a plurality of packet flows, each of the plurality of packet flows including encoded information, the detector is operable to determine if the encoded information of each of the packet flows includes a pause, and the processor is operable to adjust fragmentation of each of the plurality of packet flows according to whether any of the packet flows includes the pause. Gateway 18 receives a plurality of different packets flows from telephone 14. Refer to Column 2, lines 47-59.

Referring to claim 9, Fitzgerald disclose in Figure 1 that a packet of the packet flow indicates whether the packet flow includes the pause. If a packet or a series of packets (according to sequence numbers) are never received, severe congestion may have caused the packets to be discard by the network processing elements. Refer to Column 3, lines 25-34 and Column 3, line 54 to Column 4, line 8.

Referring to claims 10 and 20, Fitzgerald discloses in Figure 1 determining whether the packet flow includes the pause in response to a receipt frequency of packets in the packet flow. End-to-end packet delay 11 can identify congestion in the network since when the network experiences congestion, the packet flow frequency is slower, since packets may be discarded by the network processing elements. Refer to Column 3, lines 25-34.

Referring to claims 14 and 29, Fitzgerald discloses in Figure 4 that the predetermined size (20ms) is associated with a state characteristic of the packet flow.

The typical minimum payload size is 10-20ms; however, "smaller or larger audio payloads may be used depending on specific network conditions". Refer to Column 4, lines 9-15.

Referring to claim 21, Fitzgerald discloses a system for processing packets in a network, comprising:

A sender (Figure 2, packetizer 24 in transmitting packet gateway 20) operable place information in packets of a packet flow, the sender operable to provide an indication as to whether the information in the packet flow includes a pause. The packetizer packetizes encoded data from voice encoder 22, and monitors the packet network 16 for congestion. Refer to Column 3, line 54 to Column 4, line 8 and Column 4, lines 53-65. Refer also to the rejection of claims 1, 11, 16 and 26.

A linking device (Figure 2, packetizer 24 in transmitting packet gateway 20) operable to receive the packet flow from the sender, the linking device operable to adjust fragmentation of packets in the packet flow according to whether the information in the packet flow includes the pause. Refer to Column 4, lines 9-40 and Column 4, line 53 to Column 5, line 12. Refer also to the rejection of claims 1, 11, 16 and 26.

A receiver (Figure 2, transmitter 26 in transmitting packet gateway 20) operable to receive the packet flow from the linking device. Refer also to the rejection of claims 1, 11, 16 and 26.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent No. 6,421,720 to Fitzgerald in view of U.S. Patent No. 5,426,640 to Hluchyj

et al.

Referring to claim 22, Fitzgerald does not disclose that the sender is operable to

identify the pause in the information.

Hluchyj et al disclose in Figure 1 that the pause information (congestion

information) is sent in the CL field 104 with data 106 in a packet 102. Each node along

the path that transmits a packet determines a congestion level along its respective link

and updates the two bit CL field. Refer to Column 4, lines 13-59. Therefore, it would

have been obvious to one of ordinary skill in the art at the time the invention was made

to include that the sender is operable to identify the pause in the information, the

motivation being so that the sender can determine the initial congestion status and

adjust its transmission characteristics such as transmission rate or fragmentation size

accordingly.

Referring to claim 23, Fitzgerald does not disclose that the sender is operable to

classify the pause identified in the information.

Hluchyj et al in Figure 1 that the congestion CL field 104 is a two-bit field used to

store and indicate a congestion level, The two bit field of CL takes on values

corresponding to normal, mild, moderate and severe levels of congestion. Refer to

Column 4, lines 13-59. Therefore, it would have been obvious to one of ordinary skill in

the art at the time the invention was made to include that the sender is operable to classify the pause identified in the information; the motivation being so that the sender can be informed of the severity of network congestion and adjust its transmission characteristics such as transmission rate or fragmentation size accordingly.

Referring to claim 24, Fitzgerald does not disclose that the pause is classified according to whether one or more predefined limits are exceeded.

Hluchyj et al disclose in Figure 2 the predetermined limits required for congestion to move from a normal state to a mild state to a moderate state and to a severe state of congestion. Refer to Column 4, line 60 to Column 5, line 18. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the pause is classified according to whether one or more predefined limits are exceeded; the motivation being in order to maintain a distinction between congestion levels so the sender can adjust its transmission characteristics such as transmission rate or fragmentation size accordingly.

Referring to claim 25, Fitzgerald does not disclose that the sender is operable to adjust one or more bits a packet in the packet flow to indicate a presence and a classification of the pause.

Hluchyj et al in Figure 1 that the congestion CL field 104 is a two-bit field used to store and indicate a congestion level, The two bit field of CL takes on values corresponding to normal, mild, moderate and severe levels of congestion. Refer to Column 4, lines 13-59. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the sender is operable to

adjust one or more bits a packet in the packet flow to indicate a presence and a

classification of the pause; the motivation being so that the sender can utilize the bits to

determine the level of congestion and adjust its transmission characteristics such as

transmission rate or fragmentation size accordingly.

Allowable Subject Matter

5.   Claims 7, 8 and 19 are allowed.

Response to Arguments

6.   Applicant's arguments filed April 11, 2006 have been fully considered but they

are not persuasive.

Fitzgerald et al discloses detecting pauses within encoded information carried in

a packet flow and adjusting fragmentation of packets in the packet flow in response to

the encoded information including a pause. As shown in Figure 2, the packet flow

includes encoded information since the voice encoder 22 encodes incoming audio

signals into audio packets. Voice encoder 22 implements the compression half of a

codec. Then, the packetizer 24 accepts the compressed audio packets from encoder

22 and formats the data into packets for transmission. Refer to Column 2, line 47 to

Column 3, line 11. As shown in Figure 4, the packetizer 24 varies the number of audio

frames packed in each packet payload depending on network congestion conditions.

Since the packetizer 24 adjusts the fragmentation of the packets after the packets have

been encoded by voice encoder 22, the fragmentation of packets is done in response to

the encoded information including a pause.   The encoded packet flow is "paused" when

the network experiences congestion. Refer to Column 3, lines 25-34 and Column 4,

lines 9-40. If the encoded packet flow experiences no congestion, the packet payload

size (Figure 4, packet 40) remains constant (Figure 5, steps 46-52). The more

congestion the encoded packet flow experiences, the greater the packet payload size

(Figure 4, packets 42 and 44). Refer to Column 4, line 53 to Column 5, line 12.

Conclusion

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Christine Ng whose telephone number is (571) 272-

3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C. Ng
June 12, 2006

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